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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,574	07/13/2000	Jeremy Wertheimer	09765-015001	4957

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT PAPER NUMBER

3623

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/615,574	WERTHEIMER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Akiba K Robinson-Boyce	3623	<i>NEW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 21-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 21-32 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Status of Claims***

1. Due to communications filed 5/13/04, the following is a final office action. Claim 1 has been amended. Claims 21-32 have been added. New claims 21-32 have been restricted by original presentation. Therefore, claims 1-20 are currently pending in this application and have been examined on the merits. The previous office action has been withdrawn and the following reflects the claims as amended.

### ***Election/Restrictions***

2. Newly submitted claims 21-32 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The addition of the receipt of a query and sending an actual answer message as the actual availability answer in response to the query.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 21-32 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-10, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al (US 5,897,620), and further in view of Talluri (US 6,263,315).

As per claims 1, 17, Walker et al discloses:

An availability predictor that predicts seating availability on a competitive flight/receiving by the computer system a request for availability of seating on an airline flight and executing in the computer system...to predict the seating availability on a competitive flight, (Col. 8, lines 40-50, [seat allocation of competitive forces stored once calculated, where the RMS represents the availability predictor], (Col. 13, lines 31-48, [shows request for flight information for a specific itinerary, wherein the traveler is notified of the potential availability])).

An availability system that produces an actual availability response for a flight/receiving by the computer system an actual availability response for a flight, (Col. 5, lines 15-33, [monitoring the actual demand to reevaluate the inventory and transmitting the inventory information to the CRS]);

A computing system...that compares the predicted answer from the availability predictor and the potential answer from the availability system to establish a decision with respect to actual availability system to establish a decision with respect to actual availability/comparing the predicted answer from

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the availability predictor and the potential answer from the availability system to establish a decision with respect to actual availability, (col. 4, lines 37-44, [RMS system represents the computing system], w/ Col. 5, lines 18-25, [comparing actual demand to expected (forecasted) demand, where decision is determining whether or not to allocate additional inventory or reduce/eliminate inventory]).

Walker et al fails to disclose decision logic or an algorithm, but does disclose that decisions are made according to inventory allocation in col. 5, lines 18-25.

However, Talluri discloses:

decision logic/ an algorithm, (Abstract, lines 1-5, [using control logic to support decisions to accept or deny requests for resource capacity (seats)], and Col. 5, lines 4-5, [actually shows decision logic]/Col. 2, lines 30-35, [shows that in control logic schemes, algorithms are used to compute parameters]). Talluri discloses this limitation in an analogous art for the purpose of showing that logic means (by way of algorithms) are used to decide whether or not a seat is available.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include decision logic/ an algorithm with the motivation of determining seat availability in accordance with rules of decision logic.

As per claims 2, 18, Walker et al discloses:

wherein the decision of the decision logic is a bias that determines whether the potential answer should be modified based upon the relative

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competitive position of the competitor represented by the availability predictor/wherein comparing produces a decision that is a bias that determined whether the potential answer should be modified based upon the relative competitive position of the competitor represented by the availability predictor, (col. 9, lines 14-21, [correct for competitive forces]).

As per claims 3, 19, Walker et al discloses:

Modify/modifying the actual availability answer in accordance with the bias from the decision logic to modify the actual availability answer in accordance with the bias, (col. 9, lines 14-28, [where it is shown that the RMS executes a process to correct for competitive forces by deciding whether or not to increase inventory {availability of seats}]) .

Walker et al does not specifically disclose modifying logic that is responsive to the availability response from the availability system and from the bias from the decision logic, but does disclose that decisions are made according to inventory allocation in col. 5, lines 18-25.

However, Talluri discloses:

Modifying logic, (Col. 5, lines 4-9, [shown that decision logic has the additional flexibility to allow the threshold to adjust]). Talluri discloses this limitation in an analogous art for the purpose of showing that logic means are used to adjust values

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include modifying logic with the motivation of adjusting data in accordance with logic rules.

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As per claim 5, Walker et al discloses:

Wherein the decision as to an actual availability answer is based on the decision from the decision logic, (col. 5, lines 15-25, [where the decision for actual flights is represented by the reevaluation of inventory (seats) allocated]).

As per claim 6, Walker et al discloses:

Wherein the decision from the decision logic can have a plurality of states (Col. 5, lines 19-25, [where it is shown that the actual demand can be either greater than or less than the expected demand]).

As per claim 7, Walker et al discloses:

Wherein one of the states includes a neutral state that does not tend to modify the potential answer received from the availability system (Col. 12, line 62-Col. 13, line 2, [remaining inventory = 0]).

As per claim 8, Walker et al discloses:

Wherein one of states biases a potential answer towards answering that seat is available (Col. 5, lines 20-24, [allocate additional inventory {seats}]).

As per claim 9, Walker et al discloses:

Wherein one of states biases a potential answer towards answering that seat is not available, (col. 5, lines 23-25, [reduce/eliminate inventory]).

As per claim 10, Walker et al discloses:

Wherein state depends upon the relative competitive position of the competitor represented by the availability predictor (Col. 9, lines 14-21, [increasing inventory based on competitor forces]).

As per claims 14, 15, Walker et al discloses:

wherein if the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system returns a bias towards making the seat available/wherein if the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system determines whether the query was for a high cost fare, and returns a bias towards making the seat available if for a high cost fare, (col. 9, lines 18-22, [correcting for competitor forces by increasing inventory {seats available}]).

As per claim 16, Walker et al discloses:

Wherein the messages that are returned change the availability message from the availability system (Col. 5, lines 15-25, [reevaluating and allocating additional inventory]).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Walker et al (US 5,897,620), in further view of Talluri (6,263,315), and in further view of Lynch et al (US Patent 6,018,715).

As per claim 4, neither Walker et al nor Talluri disclose wherein the decision logic determines whether the prediction from the availability predictor indicates that a competitor is in a more favorable or less favorable competitive position than the answer produced by the availability system. However, Walker et al and Talluri would have included the above limitation with the motivation of determining if the available seats on an airline are accommodating to customers.

However Lynch et al 715' discloses:



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Wherein the decision logic determines whether the prediction from the availability predictor indicates that a competitor is in a more favorable or less favorable competitive position than the answer produced by the availability system (Col. 7, lines 17-40, where the decision logic is represented as fuzzy logic [representations] in Lynch et al and they determine that Delta Airlines, American Airlines and Continental Airlines [all competitors] have different logic values which are weighted according to preferred plan). Lynch '715 discloses this limitation in an analogous art for the purpose of determining if customers prefer the accommodation for the flight.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine whether the prediction from the availability predictor indicates that a competitor is in a more favorable or less favorable competitive position with the motivation of determining the best travel arrangement according to the traveler's preferences and satisfying the traveler as a customer.

6. Claims 11-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al (US 5,897,620), and further in view of Talluri (6,263,315), and further in view of Lynch et al (US 6,119,094).

As per claims 11, 20, neither Walker et al nor Talluri disclose wherein the decision logic determines whether the competitor's available booking codes are at a lower price than those which the availability system indicated the user of the system can offer/determining whether the competitor's available booking codes are at a lower price. However, Walker et al and Talluri would have

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included the above limitation with the motivation of determining if the available seats on an airline are accommodating to customers.

Wherein the decision logic determines whether the competitor's available booking codes are at a lower price than those which the availability system indicated the user of the system can offer/determining whether the competitor's available booking codes are at a lower price, (Col. 3, lines 59-63, [alternate, low-cost travel arrangements]). Lynch et al discloses this limitation in an analogous art for the purpose of accommodating the customer at a low-cost travel arrangement.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine whether the competitor's available booking codes are at a lower price than those which the availability system indicates the user of the system can offer with the motivation of accessing the travel arrangement that would be cheapest for the customer.

As per claims 12, 13, neither Walker et al nor Talluri disclose wherein if the competitor's available booking codes are not at a lower price, then the system can return a bias towards making the seat unavailable/wherein if the competitor's available booking codes are not at a lower price, then the system can test whether the original query was for a low cost fare and return a bias towards making the seat not available. However, Walker et al and Talluri would have included the above limitation with the motivation of making seats more readily available to customers.

However, Lynch '094 discloses:

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Wherein if the competitor's available booking codes are not at a lower price, then the system can return a bias towards making the seat unavailable/wherein if the competitor's available booking codes are not at a lower price, then the system can test whether the original query was for a low cost fare and return a bias towards making the seat not available (Col. 8, lines 27-32, [identifying within fare class restrictions]). Lynch '094 discloses this limitation in an analogous art for the purpose of identifying alternate low-cost travel arrangements.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to return a bias towards making a seat unavailable if the booking codes are not at a lower price with the motivation of not going outside of a price range and subjecting the customer to unnecessary costs.

### ***Response to Arguments***

7. As per the 35 U.S.C. 101 rejection given to claim 1-16, this rejection has been withdrawn due to the amendment submitted 5/13/04.
8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL.

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See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

QRB

A. R. B.  
August 3, 2004

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SUPERVISORY PATENT EXAMINER  
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